



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-1156; Directorate Identifier 2011-NM-205-AD; Amendment 39-17500; AD 2013-13-12]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** We are superseding airworthiness directive (AD) 2000-06-13 R1, which applied to certain The Boeing Company Model 737-200, -200C, -300, and -400 series airplanes. AD 2000-06-13 R1 required repetitively inspecting for cracking of the corners of the door frame and the cross beams of the aft cargo door, and corrective actions if necessary. AD 2000-06-13 R1 also required modifying the aft cargo door, which terminates the repetitive inspections. This new AD adds airplanes to the applicability, adds inspections and related investigative and corrective actions, revises certain inspection types, and reduces a certain compliance time for modifying the doors. This AD was prompted by reports of cracking in the forward and aft corner frames of the aft cargo door and in the lower cross beam. We are issuing this AD to prevent fatigue cracking of the corners of the door frame and the cross beams of the aft cargo door, which could result in rapid depressurization of the airplane.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of May 9, 2000 (65 FR 17583, April 4, 2000).

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of December 24, 1998 (63 FR 67769, December 9, 1998).

**ADDRESSES:** For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Alan Pohl, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6450; fax: 425-917-6590; email: [alan.pohl@faa.gov](mailto:alan.pohl@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001), which revised AD 2000-06-13, Amendment 39-11654 (65 FR 17583, April 4, 2000). AD 2000-06-13 superseded AD 98-25-06, Amendment 39-10931 (63 FR 67769, December 9, 1998). AD 2000-06-13 R1 applied to the specified products. The NPRM published in the Federal Register on December 4, 2012 (77 FR 71723). The NPRM proposed to continue to require repetitively inspecting for cracking of the corners of the door frame and the cross beams of the aft cargo door; doing corrective actions if necessary; and modifying the aft cargo door, which terminates the repetitive inspections. The NPRM also proposed to add airplanes to the applicability, add inspections and related investigative and corrective actions, revise certain inspection types, and reduce a certain compliance time for modifying the doors.

**Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (77 FR 71723, December 4, 2012) and the FAA's response to each comment.

**Request to Revise Compliance Time**

Boeing requested that we revise paragraph (o) of the NPRM (77 FR 71723, December 4, 2012), which specified the compliance time by referring to paragraph 1.E. of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011. Boeing requested

that we change this compliance time to “4,500 door flight cycles after the effective date of this AD” to avoid a potential conflict with other compliance times in the NPRM.

Boeing explained a scenario in which an operator could comply with paragraph (o) of the NPRM within the required compliance time, but then be immediately out of compliance with the proposed inspection in paragraphs (p) and (q) of the NPRM.

We partially agree with the request. As written, the compliance time in paragraph (o) of the NPRM (77 FR 71723, December 4, 2012) could result in a compliance conflict with other requirements of this AD for doors subject to Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010. We disagree, however, with Boeing’s requested compliance time, which would be unnecessarily more restrictive on operators. Also, the referenced doors that have accumulated fewer than 27,000 total flight cycles should be provided the same compliance time as doors subject to Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011. We have therefore revised paragraphs (p) and (q) in this final rule to change the compliance time to a threshold of 27,000 total flight cycles on the door, with a grace period of 4,500 flight cycles. Since paragraph (u)(4) of the NPRM is therefore no longer necessary, we have removed that paragraph from this final rule.

#### **Request to Revise Requirement to Determine Door Configuration**

Southwest Airlines (SWA) requested that we revise paragraph (o) of the NPRM (77 FR 71723, December 4, 2012), which specified to “Inspect the door to determine the configuration, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011.” SWA considered that the intent of this proposed requirement could be accomplished by records research instead of a physical inspection. The commenter noted that the Accomplishment Instructions of this service bulletin specify only identifying the part number of the aft cargo door assembly, and does not specify a method of accomplishment.

We agree with the commenter that a records review is acceptable in lieu of accomplishing an inspection to determine the configuration of the door. We have changed paragraph (o) accordingly in this final rule.

#### **Request to Refer to Revised Service Information**

All Nippon Airways (ANA) and Boeing requested that we revise the NPRM (77 FR 71723, December 4, 2012) to also refer to Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011, in all locations where Boeing Service Bulletin 737-52-1154, dated December 17, 2010, is cited. The commenters noted that some locations of the NPRM referred to only the original version, but other paragraphs referred to the original version “as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011.”

We agree with the commenter and have revised paragraphs (r)(2) and (u)(2) in this final rule to also add “as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011,” after the original service bulletin citation.

#### **Request to Clarify Access Procedures**

ANA noted that paragraph (s) of the NPRM (77 FR 71723, December 4, 2012) identified certain Parts in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011, for compliance with the proposed requirements. ANA stated that Part 2, which was not identified in paragraph (s) of the NPRM, provides access procedures. ANA questioned whether the AD required specific procedures for access.

We agree, and have added new paragraph (u)(4) in this final rule to clarify that the access and restoration procedures specified in the referenced service information are not required by this AD.

### **Request to Clarify Required Part References for Compliance**

ANA noted that paragraph (t) of the NPRM (77 FR 71723, December 4, 2012) referred to Parts 1, 3, 4, 7, and 8 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011. Table 3 and Table 4 of that service bulletin also refer to Parts 5 and 6 of that service bulletin. ANA questioned whether operators might do Part 5 and Part 6, which describe the preventive modification procedures, if no cracks are found. To avoid the need for requests for alternative methods of compliance (AMOCs) regarding this proposed requirement, ANA requested that we revise paragraph (t) of the NPRM to clarify that compliance is “in accordance with Parts 1, 2, 3, 4, 5, 6, 7, and 8” of that service bulletin.

We disagree with the commenter. Paragraph (s) requires actions in accordance with Parts 5 and 6 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011. Paragraph (t) of this AD requires other actions, done in accordance with Parts 1, 3, 4, 7, and 8 of that service bulletin. We find it unnecessary to change this AD regarding this issue.

### **Request to Exclude Certain Supplemental Structural Inspections**

Paragraph (v) of the NPRM (77 FR 71723, December 4, 2012) would provide relief from certain supplemental structural inspections specified in Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011, and Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010. Boeing requested that we revise paragraph (v) of the NPRM to also provide relief from the supplemental structural inspections specified in Table 5 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-52-1154, dated December 17, 2010. Boeing noted that the NPRM would require inspection of the adjacent cross beam if cracks are found in the lower cross beam, and repair of any cracked adjacent cross beam, in accordance with Boeing Service Bulletin 737-52-1154, dated December 17, 2010, but the damage-tolerance inspections associated with that repair are not mentioned.

We agree with the request. We have revised paragraph (v) in this final rule to also include reference to Table 5 of Boeing Service Bulletin 737-52-1154, dated December 17, 2010.

#### **Request to Delay Final Rule Pending Revised Service Information**

ANA stated that Boeing was in the process of revising Boeing Service Bulletins 737-52-1153 and 737-52-1154 based on ANA's validation. ANA requested that we cite the revised service information, if it is available before the final rule is issued, to reduce additional burden for Boeing and the operators. Boeing reported that Boeing Service Bulletin 737-52-1154 was being revised to add extra material to the repair parts to address issues regarding repair kits found during the validation of the bulletin.

We disagree to delay issuance of the final rule pending issuance of revised service information. Accomplishing the service information specified in this AD addresses the identified unsafe condition. When the revised service bulletins are presented to us for review, however, we might consider approving them as AMOCs for this AD. We have not changed this final rule regarding this issue.

#### **Additional Changes Made to This AD**

We have revised paragraph (v) and Note 2 to paragraph (v) of this final rule. We have designated paragraph (v) as paragraph (v)(1) of this final rule, and have reidentified Note 2 to paragraph (v) as paragraph (v)(2) of this final rule.

#### **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the

changes described previously – and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 71723, December 4, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 71723, December 4, 2012).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

### Costs of Compliance

We estimate that this AD affects 581 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

#### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Number of airplanes of U.S. Registry	Cost on U.S. operators
Detailed inspection (retained action)	2 work-hours X \$85 per hour = \$170 per inspection cycle	\$0	\$170 per inspection cycle	494	\$83,890 per inspection cycle
High frequency eddy current inspection (retained action)	4 work-hours X \$85 per hour = \$340 per inspection cycle	\$0	\$340 per inspection cycle	494	\$167,960 per inspection cycle
Modification (retained action)	144 work-hours X \$85 per hour = \$12,240	\$5,430	\$17,670	494	\$8,728,980
Determination of door configuration (new action)	1 work-hour X \$85 per hour = \$85	\$0	\$85	581	\$49,385



<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Number of airplanes of U.S. Registry</b>	<b>Cost on U.S. operators</b>
Inspections (new action)	6 work-hours X \$85 per hour = \$510 per inspection cycle	\$0	\$510 per inspection cycle	581	\$296,310 per inspection cycle
Modification (new action)	59 work-hours X \$85 per hour = \$5,015	\$30,536	\$35,551	*	Unknown

\*The number of airplanes that require this modification depends on no cracking being found during a certain inspection.

We estimate the following costs to do any necessary related investigative and corrective actions that would be required based on the results of the inspections. We have no way of determining the number of aircraft that might need these actions:

#### **On-condition costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Related investigative and corrective actions	59 work-hours X \$85 per hour = \$5,015	\$30,536	\$35,551

#### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001), and adding the following new AD:

**2013-13-12 The Boeing Company:** Amendment 39-17500 ; Docket No. FAA-2012-1156; Directorate Identifier 2011-NM-205-AD.

**(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD supersedes AD 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001).

**(c) Applicability**

This AD applies to all The Boeing Company Model 737-200, -200C, -300, -400, and -500 series airplanes, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 52, Doors.

**(e) Unsafe Condition**

This AD was prompted by reports of cracking in the forward and aft corner frame of the aft cargo door and in the lower cross beam. We are issuing this AD to prevent fatigue cracking of the corners of the door frame and the cross beams of the aft cargo door, which could result in rapid depressurization of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Affected Airplanes for Retained Paragraphs**

Paragraphs (h), (i), (j), (k), and (l) of this AD are restated from AD 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001). These paragraphs apply to Model 737-200 and -200C series airplanes, line numbers 6 through 873 inclusive; and Model 737-200, -200C, -300, and -400 series airplanes, line numbers

874 through 1642 inclusive; equipped with an aft cargo door having Boeing part number (P/N) 65-47952-1 or P/N 65-47952-524, excluding airplanes identified in paragraphs (g)(1) and (g)(2) of this AD.

(1) Those airplanes on which that door has been modified as specified in Boeing Service Bulletin 737-52-1079. Or,

(2) Those airplanes on which the door assembly having P/N 65-47952-524 includes four straps (P/Ns 65-47952-139, 65-47952-140, 65-47952-141, and 65-47952-142) and a thicker lower cross beam web (P/N 65-47952-157).

**(h) Retained Inspections and Corrective Actions**

This paragraph restates the actions required by paragraph (a) of AD 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001), with revised service information. For airplanes identified in paragraph (g) of this AD: Within 90 days or 700 flight cycles after December 24, 1998 (the effective date of AD 98-25-06, Amendment 39-10931 (63 FR 67769, December 9, 1998)), whichever occurs later, perform an internal detailed visual inspection to detect cracking of the corners of the door frame and the cross beams of the aft cargo door, in accordance with Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999; or Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010. Accomplishment of the modification required by paragraph (l) of this AD constitutes terminating action for the repetitive inspection requirements of this paragraph. Doing the inspections required by paragraph (p) or (s) of this AD terminates the inspections required by this paragraph.

(1) If no cracking is detected, accomplish the requirements of either paragraph (h)(1)(i) or (h)(1)(ii) of this AD.

(i) Repeat the internal visual inspection thereafter at intervals not to exceed 4,500 flight cycles. Or

(ii) Prior to further flight, modify the corners of the door frame and the cross beams of the aft cargo door, in accordance with Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999; or Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (h)(1)(i) of this AD.

(2) If any cracking is detected in the upper or lower cross beams, prior to further flight, modify the cracked beam, in accordance with Part I of the Accomplishment Instructions of Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; Part I of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999; or Part II of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (h)(1)(i) of this AD for the modified beam.

(3) If any cracking is detected in the forward or aft upper door frame, prior to further flight, repair the frame and modify the corners of the door frame of the aft cargo door, in accordance with Part I of the Accomplishment Instructions of Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; Part I of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999; or Part II of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010; except as provided by paragraph (i) of this AD. Accomplishment of such modification constitutes

terminating action for the repetitive inspection requirements of paragraph (h)(1)(i) of this AD for the upper door frame.

(4) If any cracking is detected in the forward or aft lower door frame, prior to further flight, replace the damaged frame with a new frame, and modify the corners of the door frame of the aft cargo door, in accordance with Part I of the Accomplishment Instructions of Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; Part I of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999; or Part II of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (h)(1)(i) of this AD for the lower door frame.

**(i) Retained Exception for Certain Actions Specified in Paragraphs (h) and (l) of this AD**

This paragraph restates the requirement of paragraph (b) of AD 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001). For actions required by paragraphs (h) and (l) of this AD: Where Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999; or Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010; specifies that certain repairs are to be accomplished in accordance with instructions received from Boeing, this AD requires that, prior to further flight, such repairs be accomplished in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or using a method approved in accordance with the procedures specified in paragraph (x) of this AD.

**(j) Retained Corrective Actions for Certain Cracking Found During Inspection Required by Paragraph (h) of this AD**

This paragraph restates the corrective action required by paragraph (c) of AD 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001), with revised service information. If any cracking of the outer chord of the upper or lower cross beams of the aft cargo door is detected during any inspection required by paragraph (h) of this AD, prior to further flight, accomplish the repair specified in paragraph (j)(1), (j)(2), (j)(3), or (j)(4) of this AD. For a repair method to be approved, as required by paragraphs (j)(1), (j)(3), and (j)(4) of this AD, the approval letter must specifically reference this AD.

(1) Repair in accordance with a method approved by the Manager, Seattle ACO.

(2) Repair in accordance with Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999; or Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010.

(3) Repair in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the FAA to make such findings.

(4) Repair in accordance with a method approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

**(k) Retained Inspections and Corrective Actions for Airplanes Identified in Paragraph (g) of this AD**

This paragraph restates the actions required by paragraph (d) of AD 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001), with revised service information. For airplanes identified in paragraph (g) of this AD: Within 4,500 flight cycles or 1 year after May 9, 2000 (the effective date of AD 2000-06-13, Amendment 39-11654 (65 FR 17583, April 4, 2000), whichever occurs later, perform a high frequency eddy current inspection (HFEC) to detect cracking of the four corners of

the door frame of the aft cargo door, using a method approved in accordance with the procedures specified in paragraph (x) of this AD, or in accordance with Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999; or Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010. Accomplishment of the modification required by paragraph (l) of this AD constitutes terminating action for the repetitive inspection requirements of this paragraph. Doing the inspections required by paragraph (p) or (s) of this AD terminates the inspections required by this paragraph.

Note 1 to paragraph (k) of this AD: Additional guidance for the inspection can be found in Boeing 737 Nondestructive Test Manual, Part 6, Chapter 51-00-00 (Figure 4 or Figure 23).

(1) If no cracking of the corners of the door frame of the aft cargo door is detected, repeat the HFEC inspections thereafter at intervals not to exceed 4,500 flight cycles until accomplishment of the modification specified in paragraph (l) of this AD.

(2) If any cracking of the corners of the door frame of the aft cargo door is detected, prior to further flight, replace the damaged frame with a new frame, and modify the four corners of the door frame, in accordance with Part II and Part III of the Accomplishment Instructions of Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; Part II and Part III of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999; or Part III and Part IV of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (k)(1) of this AD for that door frame.

**(l) Retained Terminating Action for Inspections Specified in Paragraphs (h) and (k) of this AD**

This paragraph restates the action required by paragraph (e) of AD 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001), with revised



service information. For airplanes identified in paragraph (g) of this AD: Within 4 years or 12,000 flight cycles after August 15, 2001 (the effective date of AD 2000-06-13 R1), whichever occurs later, modify the four corners of the door frame and the cross beams of the aft cargo door, in accordance with Part II of the Accomplishment Instructions of Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; Part II of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999; or Part III of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010. Accomplishment of that modification constitutes terminating action for the repetitive inspection requirements of paragraphs (h) and (k) of this AD.

**(m) Retained Method of Compliance**

This paragraph restates the method of compliance of Note 3 of AD 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001). Accomplishment of the modification required by paragraph (a) of AD 90-06-02, Amendment 39-6489 (55 FR 8372, March 7, 1990), is considered acceptable for compliance with the requirements of paragraph (l) of this AD.

**(n) Retained Credit for Previous Actions**

This paragraph restates the credit given for service information specified in Note 4 of AD 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001). This paragraph provides credit for the modification of the corners of the door frame and the cross beams of the aft cargo door required by paragraph (l) of this AD, if the modification was accomplished prior to August 15, 2001 (the effective date of AD 2000-06-13 R1), using Boeing Service Bulletin 737-52-1079, dated December 16, 1983; Revision 1, dated December 15, 1988; Revision 2, dated July 20, 1989; Revision 3, dated May 17, 1990; or Revision 4, dated February 21, 1991.

**(o) New Requirement for Determining Door Configuration**

At the applicable time specified in Table 1 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011, except as provided by paragraph (u)(1) of this AD: Inspect to determine the configuration of the aft cargo door, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011. A review of airplane maintenance records is acceptable in lieu of this inspection if the configuration of the cargo door can be conclusively determined from that review.

**(p) New Requirements for Certain Doors Subject to Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010**

If, during the inspection required by paragraph (o) of this AD, any door is determined to be from any airplane having line numbers 6 through 873 inclusive, and neither the modification nor the repair specified in any service bulletin identified in paragraphs (p)(1) through (p)(7) of this AD has been done as of the effective date of this AD: Do a one-time HFEC and a one-time ultrasonic inspection for cracking of the upper and lower corner frames and the upper and lower cross beams, and do all applicable related investigative and corrective actions, in accordance with Parts II, III, IV, and VI of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010; and, as applicable, the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010, as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011; except as provided by paragraphs (u)(2) and (u)(3) of this AD. Do the inspections before the accumulation of 27,000 total flight cycles on the door, or within 4,500 door flight cycles after the effective date of this AD, whichever occurs later (for airplanes on which the door flight cycles are known); or within 4,500 flight cycles after the effective date of this AD (for airplanes on which door flight cycles are not known). Do all applicable related investigative and corrective actions

before further flight. If no cracking is found during the initial inspections, before further flight, do the modification in accordance with Part III of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010. Doing the inspection specified in this paragraph terminates the inspections required by paragraphs (h) and (k) of this AD.

- (1) Boeing Service Bulletin 737-52-1079, dated December 16, 1983.
- (2) Boeing Service Bulletin 737-52-1079, Revision 1, dated December 15, 1988.
- (3) Boeing Service Bulletin 737-52-1079, Revision 2, dated July 20, 1989.
- (4) Boeing Service Bulletin 737-52-1079, Revision 3, dated May 17, 1990.
- (5) Boeing Service Bulletin 737-52-1079, Revision 4, dated February 21, 1991.
- (6) Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996.
- (7) Boeing Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999.

**(q) Requirements for All Doors Subject to Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010**

If, during the inspection required by paragraph (o) of this AD, any door is determined to be from any airplane having line numbers 6 through 873 inclusive: Before the accumulation of 27,000 total flight cycles on the door, or within 4,500 door flight cycles after the effective date of this AD, whichever occurs later, (for airplanes on which the door flight cycles are known); or within 4,500 flight cycles after the effective date of this AD (for airplanes on which door flight cycles are not known); inspect the lower corner frames to determine if the door has reinforcement angles, P/N 65C25180-9, -43, -10, -11, or -12, that were installed as specified in any service bulletin identified in paragraphs (q)(1) through (q)(5) of this AD. If any affected reinforcement angle is found, do a one-time general visual inspection for edge margin and do a detailed inspection for cracks; in accordance with Part V of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010.

- (1) Boeing Service Bulletin 737-52-1079, dated December 16, 1983.
- (2) Boeing Service Bulletin 737-52-1079, Revision 1, dated December 15, 1988.
- (3) Boeing Service Bulletin 737-52-1079, Revision 2, dated July 20, 1989.
- (4) Boeing Service Bulletin 737-52-1079, Revision 3, dated May 17, 1990.
- (5) Boeing Service Bulletin 737-52-1079, Revision 4, dated February 21, 1991.

**(r) Corrective Actions for Inspections Specified in Paragraph (q) of this AD**

If, during any inspection required by paragraph (q) of this AD, any crack is found, or if any edge margin does not meet the specification identified in Part V of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010, before further flight, do the actions specified in paragraphs (r)(1), (r)(2), and (r)(3) of this AD.

(1) Replace the corner reinforcement angle, in accordance with Part III of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010.

(2) Do a one-time detailed inspection or HFEC inspection for cracking at the forward and aft ends of cross beam D, in accordance with Part 1 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010; or Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010, as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011. If any cracking is found, before further flight, do all applicable repairs in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010; or Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010, as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011, except as provided by paragraph (u)(2) of this AD.

(3) Do a one-time detailed inspection or ultrasonic inspection for cracking on the frames, in accordance with Part 2 (detailed inspection) or Part 8 (ultrasonic inspection) of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010, as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011. If any cracking is found, before further flight, replace the frame in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010.

**(s) Requirements for Doors Subject to Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011**

If, during the action required by paragraph (o) of this AD, a door is determined to be from an airplane having line numbers 874 and subsequent: At the applicable time specified in Tables 1 and 2 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011, except as provided by paragraph (u)(1) of this AD, do high frequency and detailed inspections for cracks in the forward and aft ends of cross beam E, and do all applicable related investigative and corrective actions, in accordance with Parts 1, 3, 4, 5, and 6 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011; and, as applicable, the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010, as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011; except as provided by paragraph (u)(2) of this AD. Do all applicable related investigative and corrective actions at the applicable time specified in Tables 1 and 2 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011, except as provided by paragraph (u)(1) of this AD. If no cracking is found during the inspections specified in Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011, at the applicable time specified in Tables 1 and 2 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011, except as provided by paragraph (u)(1) of this AD, do

the modification in accordance with Parts 5 and 6, as applicable, of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011. Repeat the inspections thereafter at the times specified in Tables 1 and 2 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011, until the preventative modification or repair is done to both ends of cross beam E in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011. Doing the inspection specified in this paragraph terminates the inspections required by paragraphs (h) and (k) of this AD.

**(t) One Time Inspections for Doors Subject to Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011**

If, during the actions required by paragraph (o) of this AD, a door is determined to be from an airplane having line numbers 874 and subsequent: At the applicable time specified in Tables 3 and 4 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011, except as provided by paragraph (u)(1) of this AD, do a one-time ultrasonic inspection of the frame and a detailed inspection of the reinforcing angle for cracks of the forward and aft ends of cross beam E, and do all applicable related investigative and corrective actions, in accordance with Parts 1, 3, 4, 7, and 8 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011; and, as applicable; the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010, as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011; except as provided by paragraph (u)(2) of this AD. Do all applicable related investigative and corrective actions before further flight.

**(u) Service Information Exceptions**

The following exceptions apply to this AD.

(1) Where paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011, specifies a compliance time “after the original issue

date of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Where Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010; and Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010, as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011, specify to contact Boeing for repair, before further flight, repair using a method approved in accordance with the procedures specified in paragraph (x) of this AD.

(3) Where Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010, specifies to contact Boeing for repair, before further flight, repair using a method approved in accordance with the procedures specified in paragraph (x) of this AD.

(4) This AD does not require accomplishment of the access and restoration procedures identified in the Work Instructions of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010; Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011; Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010; and Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010, as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011.

**(v) Supplemental Structural Inspections**

(1) The supplemental structural inspections specified in Tables 5 and 6 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011; and Tables 3 and 4 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010; and Table 5 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-52-1154, dated

December 17, 2010, as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011, are not required by this AD.

(2) The damage tolerance inspections specified in Tables 5 and 6 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011; and Tables 3 and 4 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010; and Table 5 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-52-1154, dated December 17, 2010, as revised by Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011; may be used in support of compliance with section 121.1109(c)(2) or 129.109(b)(2) of the Federal Aviation Regulations (14 CFR 121.1109(c)(2) or 14 CFR 129.109(b)(2)). The corresponding actions specified in the Accomplishment Instructions and figures of Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011; and Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010; are not required by this AD.

**(w) Credit for Previous Actions**

(1) This paragraph provides credit for actions required by paragraphs (p), (q), and (r) of this AD, if the actions were accomplished before the effective date of this AD using any service information specified in paragraph (w)(1)(i), (w)(1)(ii), (w)(1)(iii), (w)(1)(iv), (w)(1)(v), (w)(1)(vi), or (w)(1)(vii) of this AD.

(i) Boeing Service Bulletin 737-52-1079, dated December 16, 1983.

(ii) Boeing Service Bulletin 737-52-1079, Revision 1, dated December 15, 1988.

(iii) Boeing Service Bulletin 737-52-1079, Revision 2, dated July 20, 1989.

(iv) Boeing Service Bulletin 737-52-1079, Revision 3, dated May 17, 1990.

(v) Boeing Service Bulletin 737-52-1079, Revision 4, dated February 21, 1991.

(vi) Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996.



(vii) Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999.

(2) This paragraph provides credit for actions required by paragraphs (s) and (t) of this AD, if the actions were accomplished before the effective date of this AD using Boeing Service Bulletin 737-52-1154, dated December 17, 2010, provided that any alternative detailed inspections specified in Part 17 of the Accomplishment Instructions of Boeing Service Bulletin 737-52-1154, dated December 17, 2010, were done in accordance with Part 11 of the Accomplishment Instructions of Boeing Service Bulletin 737-52-1154, dated December 17, 2010.

**(x) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed to: [9-ANM-Seattle-ACO-AMOC-Requests@faa.gov](mailto:9-ANM-Seattle-ACO-AMOC-Requests@faa.gov).

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes ODA that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved previously in accordance with AD 2000-06-13, Amendment 39-11654 (65 FR 17583, April 4, 2000); and AD 2000-06-13 R1, Amendment 39-12317 (66 FR 36146, July 11, 2001); are approved as AMOCs for the corresponding requirements of this AD.

**(y) Related Information**

For more information about this AD, contact Alan Pohl, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6450; fax: 425-917-6590; email: [alan.pohl@faa.gov](mailto:alan.pohl@faa.gov).

**(z) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Boeing Alert Service Bulletin 737-52A1153, dated July 13, 2011.

(ii) Boeing Alert Service Bulletin 737-52A1079, Revision 7, dated December 17, 2010.

(iii) Boeing Special Attention Service Bulletin 737-52-1154, dated December 17, 2010.

(iv) Boeing Special Attention Service Bulletin 737-52-1154, Revision 1, dated August 3, 2011.

(4) The following service information was approved for IBR on May 9, 2000 (65 FR 17583, April 4, 2000).

(i) Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999.

(ii) Reserved.

(5) The following service information was approved for IBR on December 24, 1998 (63 FR 67769, December 9, 1998).

(i) Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996.

(ii) Reserved.

(6) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(7) You may view this service information at FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

(8) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on June 18, 2013.

John P. Piccola,  
Acting Manager,

Transport Airplane Directorate,  
Aircraft Certification Service.

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